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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/492,454	01/27/2000	Xiaowen Yang	YANG I	9889

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EXAMINER

FAKHRAI, SAM S

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/492,454

Applicant(s)

YANG, XIAOWEN

Examiner

Sam Fakhrai

Art Unit

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on November 21, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

Claim Rejections - 35 USC § 102

:The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 10-13, 15 and 16, and 19-22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,415,031 to Colligan et al.

Regarding Claim 10, Colligan et al. discloses:

- A method of scrambling a packetized digital data stream, comprising:
 - Producing a data stream comprising a plurality of data packets
(See column 10, lines 34-35, and corresponding "CONSTRUCT TS PACKET WITH ENCRYPTED TS PAYLOAD 1212" of Figure 12A);
and
 - Scrambling every nth one of said plurality of data packets, where n is an integer greater than 1, leaving remaining ones of said plurality of data packets unscrambled (See column 12, lines 58-60, and corresponding Figure 14E).

Regarding claim 15, Colligan et al. discloses:

- A method of descrambling a packetized digital data stream, comprising:
 - Receiving a data packet stream comprising a plurality of data packets (See column 10, lines 49-52 and corresponding Figure 12B).
 - Descrambling every nth one of said plurality of data packets, where n is an integer greater than 1, leaving remaining ones of said plurality of data packets as received (See column 13, lines 32-35, and corresponding Figure 15).

Regarding Claim 19, Colligan et al. discloses:

- An apparatus for scrambling a packetized digital data stream, comprising:
 - Means for producing a data packet stream comprising a plurality of data packets (See column 5, lines 58-63, and corresponding Figure 5A); and
 - Means for scrambling every nth one of said plurality of data packets, where n is an integer greater than 1, leaving remaining ones of said plurality of data packets unscrambled (Column 5, lines 37-39 and corresponding "REMOTE SERVER 404" of Figure 4).

Regarding Claim 21, Colligan et al. discloses:

- An apparatus for descrambling a packetized digital data stream, comprising:
 - Means for receiving a data packet stream comprising a plurality of data packets (See column 5, lines 64-66, and column 6, lines 1-4, and corresponding "SUBSCRIBER STATION 110" of Figure 4); and
 - Means for descrambling every nth one of said plurality of data packets, where n is an integer greater than 1, leaving remaining ones of said plurality of data packet as received (See column 13, lines 35-38).

Regarding Claims 11, 16, 20, and 22, Colligan et al. discloses:

- The data packet stream is an MPEG-2 digital data stream (See column 9, lines 18-49, and corresponding Figure 11A).

Regarding Claims 12 and 13, Colligan et al. discloses:

- The data packet stream comprises compressed video data or compressed audio data (See column 10, lines 10-12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,415,031 to Colligan et al. in view of U.S. Pat. No. 5,805,700 to Nardone et al.

Regarding Claim 1, Colligan et al. discloses:

- A device to descramble a packetized data stream, comprising:
 - A receiver to receive a packet of a scrambled packetized digital data stream (See column 5, lines 64-66, and column 6, lines 1-4, and corresponding "SUBSCRIBER STATION 110" of Figure 4), said packet including a header portion (See "TS HEADER 1102" of Figure 13) and a data payload including a scrambled portion (See "TS PAYLOAD ENCRYPTED FOR ALL TS PACKETS 1404" of Figure 14A)
 - A descrambler to descramble the scrambled portion of the data payload of the packet (See column 13, lines 35-38).

However, Colligan et al. does not disclose:

- The data payload including a scrambled portion and a clear, unscrambled portion.

Nardone et al. discloses:

- Selective encryption of Basic Transfer Units (BTU's), in which the BTU's containing the start codes of I-frames are encrypted (See column 3, lines 45-48 and corresponding Figure 4).
- A data payload including a scrambled portion and a clear unscrambled portion (See examiner's note below).

The examiner notes the following regarding the Nardone et al. disclosure above:

- An MPEG-2 Transport Stream packet payload could comprise two Basic Transfer Units, the first Basic Transfer Unit containing an I-frame start code. Thus the payload would include a scrambled portion and a clear, unscrambled portion.

Colligan et al. could be modified by Nardone et al. to arrive at the claimed invention in the following way:

- Data payload disclosed in Colligan et al. could be modified to include a clear unscrambled portion as taught by Nardone et al.

One of ordinary skill in the art would have found it obvious to apply the above modification because the use of the method of selective encryption disclosed in Nardone et al. approximates the level of degradation achieved by total encryption while requiring only a fraction of the processor cycle cost (See Nardone et al., column 1, lines 45-49).

Regarding Claim 2, note that the additional limitation is disclosed by Nardone et al. of the Colligan et al. and Nardone et al. combination as applied to Claim 1 above. Specifically, Nardone et al. discloses all of the claimed subject matter regarding Claim 1, as discussed above with respect to Claim 1, and also discloses:

- Selective encryption of Basic Transfer Units (BTU's), in which the BTU's containing the start codes of I-frames are encrypted (See column 3, lines 45-48 and corresponding Figure 4).
- In light of the examiner's note below, the scrambled portion of the data payload would be at a position such that it is preceeded and succeeded by clear, unscrambled portions within the packet.

The examiner notes the following regarding the Nardone et al. disclosure above:

- An MPEG-2 Transport Stream packet payload could comprise three Basic Transfer Units, the second and center Basic Transfer Unit containing an I-frame start code. Thus, the scrambled portion of the data payload would be at a position such that it is preceeded and succeeded by clear, unscrambled portions within the packet.

Regarding Claims 3, 4, 5, and 6, note that the additional limitation is disclosed by Colligan et al. of the Colligan et al. and Nardone et al. combination as applied to Claims 1 and 2 above. Specifically, Colligan et al. discloses all of the claimed subject matter regarding Claims 1 and 2, and also discloses:

- The data packet stream is an MPEG-2 digital data stream (See column 9, lines 18-49, and corresponding Figure 11A).

- The packet contains compressed digital data (See column 9, lines 18-49, and corresponding Figure 11A, and note that MPEG-2 is a type of compressed digital data).
- The compressed digital data includes a video signal (See column 10, lines 10-12).
- The compressed digital data includes an audio signal (See column 10, lines 10-12).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,415,031 to Colligan et al. in view of U.S. Pat. No. 5,805,700 to Nardone et al., as applied to Claims 1-6 above, and in further view of U.S. Pat. No. 6,021,199 to Ishibashi.

Regarding Claim 7, the combination of Colligan et al. and Nardone et al. discloses all of the claimed subject matter regarding Claims 1 and 4, but does not disclose:

- Compressed digital data comprises a video signal and an audio signal.

Ishibashi discloses:

- Compressed digital data comprises a video signal and an audio signal (See column 29-32, and corresponding Figure 4).

The combination of Colligan et al. and Nardone et al. could be modified by Ishibashi to arrive at the claimed invention in the following way:

- The compressed digital data disclosed in Colligan et al. could include a video signal and an audio signal.

One of ordinary skill in the art would have found it obvious to apply the above modification because a data packet stream with compressed audio and compressed video, can be used to store the stream on a DVD medium as shown by Ishibashi et al. (See column 4, lines 29-32, and corresponding Figure 4).

5. Claims 8, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,415,031 to Colligan et al. in view of U.S. Pat. No. 6,246,767 to Akins II, et al.

Regarding Claim 8, Colligan et al. discloses:

- A method of scrambling a packetized digital data stream, comprising:
 - Producing a data packet stream comprising a plurality of data packets (See column 10, lines 34-35, and corresponding “CONSTRUCT TS PACKET WITH ENCRYPTED TS PAYLOAD 1212” of Figure 12A); and
 - Scrambling a first portion of a data payload of at least some of said plurality of data packets within said data stream (See column 12, lines 58-60, and corresponding Figure 14E).

However, Colligan et al. does not disclose:

- Without scrambling a header of said at least some of said plurality of data packets.

Akins III, et al. discloses:

- Scrambling the payload of a data packet without scrambling the header (See column 19, lines 21-24).

Colligan et al. could be modified by Akins III, et al. to arrive at the claimed invention in the following way:

- The step of scrambling a first portion of a data payload of at least some of the plurality of data packets, could specifically include not scrambling the header.

One of ordinary skill in the art would have found it obvious to apply the above modification because a digital data stream packet header contains fields critical to stream transmission that needs to be in clear. An example of this is a field for a counter that is incremented each packet that allows for the detection of missing packets.

Regarding Claim 17, Colligan et al. discloses:

- An apparatus for scrambling a packetized digital data stream, comprising:
 - Means for producing a data stream comprising a plurality of data packets (See column 5, lines 58-63, and corresponding Figure 5A).
 - Means for scrambling a first portion of a data payload of at least some of said plurality of data packets within said data stream (See Column 5, lines 37-39 and corresponding "REMOTE SERVER 404" of Figure 4).

However, Colligan et al. does not disclose:

- Without scrambling a header of said at least some of said plurality of data packets.

Akins III, et al. discloses:

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- Scrambling the payload of a data packet without scrambling the header

(See column 19, lines 21-24).

Colligan et al. could be modified by Akins III, et al. to arrive at the claimed invention in the following way:

- The means of scrambling a first portion of a data payload of at least some of the plurality of data packets, could specifically include not scrambling the header.

One of ordinary skill in the art would have found it obvious to apply the above modification because a digital data stream packet header contains fields critical to stream transmission that needs to be in clear. An example of this is a field for a counter that is incremented each packet that allows for the detection of missing packets.

Regarding Claim 18, note that the additional limitation is disclosed by Colligan et al. of the Colligan et al. and Akins II, et al. combination, as applied to Claim 17 above. Specifically, Colligan et al. discloses all of the claimed subject matter of Claim 17, as discussed with respect to Claims 10 and 17, and also discloses:

- The data packet stream comprises an MPEG-2 digital data stream (See column 9, lines 18-49, and corresponding Figure 11A).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,415,031 to Colligan et al. in view of U.S. Pat. No. 6,246,767 to Akins III, et al., as applied to Claim 8 above, in further view of Nardone et al.

Regarding Claim 9, combination of Colligan et al. and Akins III, et al. discloses all of the claimed subject matter of Claim 8, as discussed with respect to Claim 8 above, but does not disclose:

- Scrambling leaves a second portion of said data payload of each of said at least some of said plurality of data packets unscrambled.

Nardone et al. discloses:

- Selective encryption of Basic Transfer Units (BTU's), in which the BTU's containing the start codes of I-frames are encrypted (See column 3, lines 45-48 and corresponding Figure 4).
- Scrambling leaves a second portion of said data payload of each of said at least some of said plurality of data packets unscrambled (See examiners note below).

The examiner notes the following regarding the Nardone et al. disclosure above:

- An MPEG-2 Transport Stream packet payload could comprise two Basic Transfer Units, the first Basic Transfer Unit containing an I-frame start code. Thus the payload would include a scrambled portion and a clear, unscrambled portion.

The combination of Colligan et al. and Akins III, et al. could be modified by Nardone et al. to arrive at the claimed invention in the following way:

- The method of scrambling taught by Colligan et al. could be modified such that the scrambling leaves a second portion of said data payload of each

of said at least some of said plurality of data packets unscrambled as taught by Nardone et al.

One of ordinary skill in the art would have found it obvious to apply the above modification because the use of the method of selective encryption disclosed in Nardone et al. approximates the level of degradation achieved by total encryption while requiring only a fraction of the processor cycle cost (See Nardone et al., column 1, lines 45-49).

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No.6,415,031 to Colligan et al., as applied to Claim 10 above, in view of U.S. Pat. No. 6,021,199 to Ishibashi.

Regarding Claim 14, Colligan et al. discloses, all of the claimed subject matter regarding Claim 10, as discussed with respect to Claim 10 above, and also discloses:

- The data packet stream comprises compressed video data or compressed audio data (See column 10, lines 10-12).

However, Colligan et al. does not disclose:

- The data packet stream comprises compressed video data and compressed audio data.

Ishibashi discloses:

- The data packet stream comprises compressed video data and compressed audio data (See column 29-32, and corresponding Figure 4).

Colligan et al. could be modified by Ishibashi to arrive at the claimed invention in the following way:

- The data packet stream disclosed in Colligan et al. could include compressed video data and compressed audio data.

One of ordinary skill in the art would have found it obvious to apply the above modification because a data packet stream with compressed audio and compressed video, can be used to store the stream on a DVD medium as shown by Ishibashi et al. (See column 4, lines 29-32, and corresponding Figure 4).

Conclusion

8. The prior art made record of and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,424,714 to Wasilewski et al., U.S. Pat. No. 5,721,778 to Kubota et al., U.S. Pat. No. 5,920,626 to Durden et al., and U.S. Pat. No. 5,684,876 to Pinder et al. are each considered particularly pertinent to the applicant's claimed invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Fakhrai whose telephone number is 703-305-8767. The examiner can normally be reached on M-F, 9:30 AM – 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached at 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

ssf
November 24, 2003



SAFET METJAHIC
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